ENVRI FAIR

… in a Nutshell

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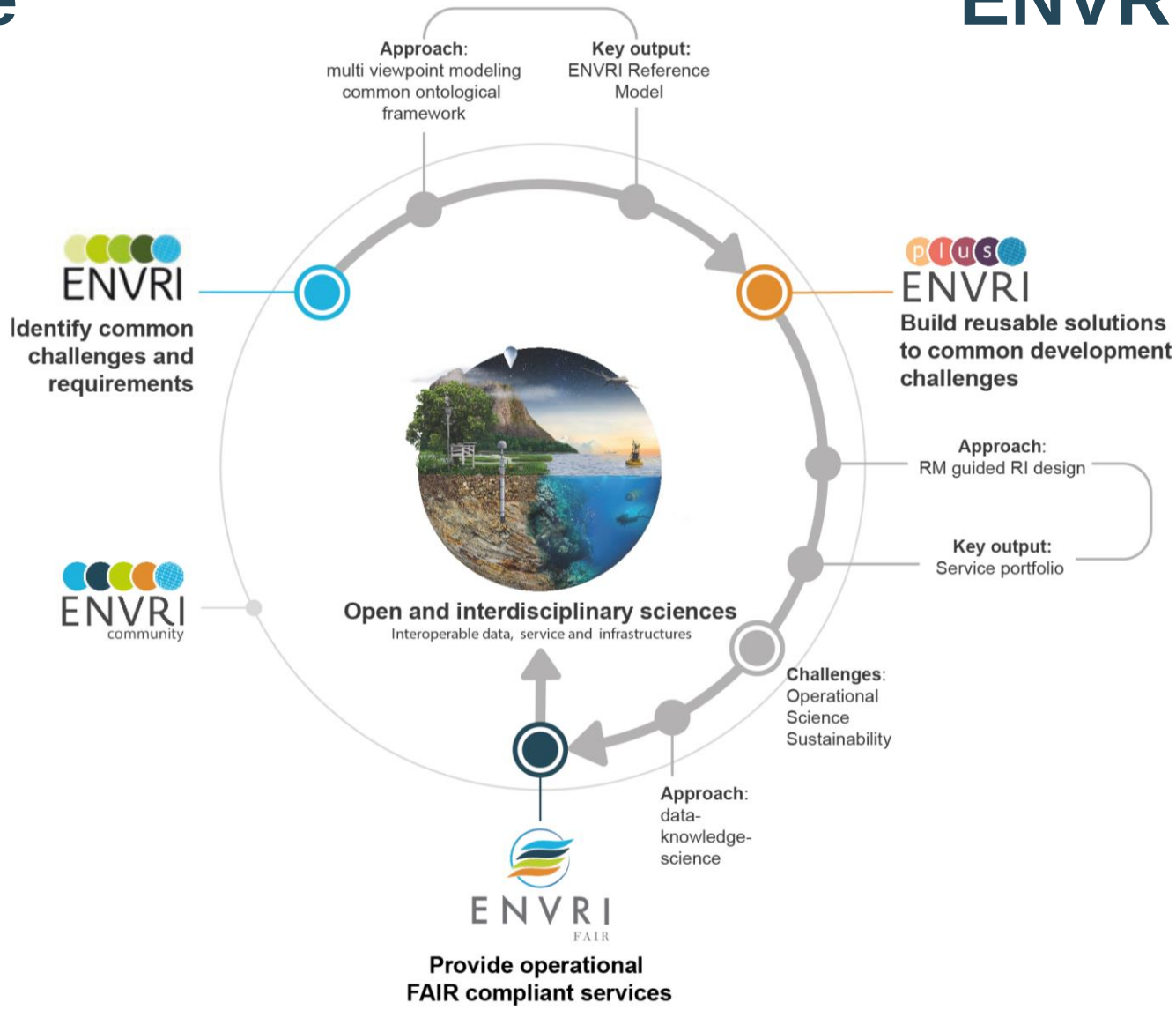
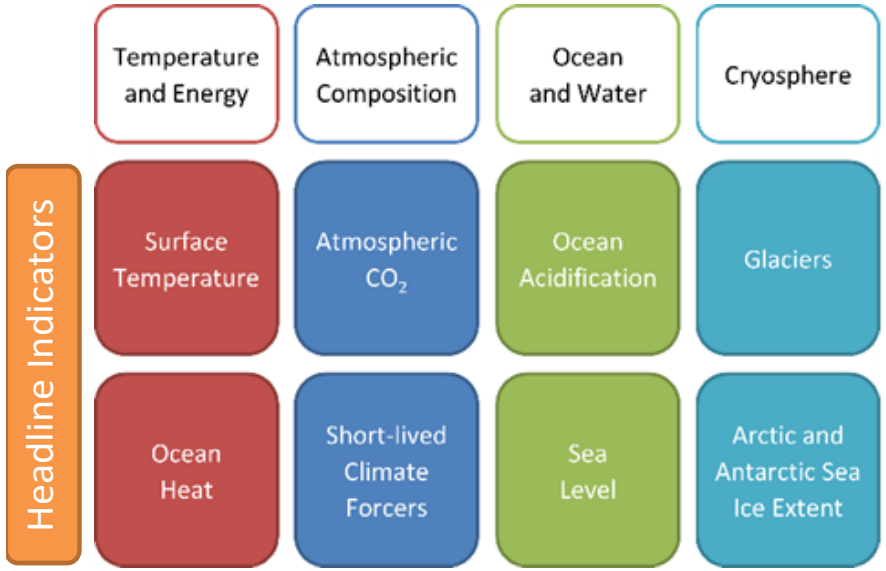
Building the ENVRI Community



The Climate Crisis - Our Key Challenge



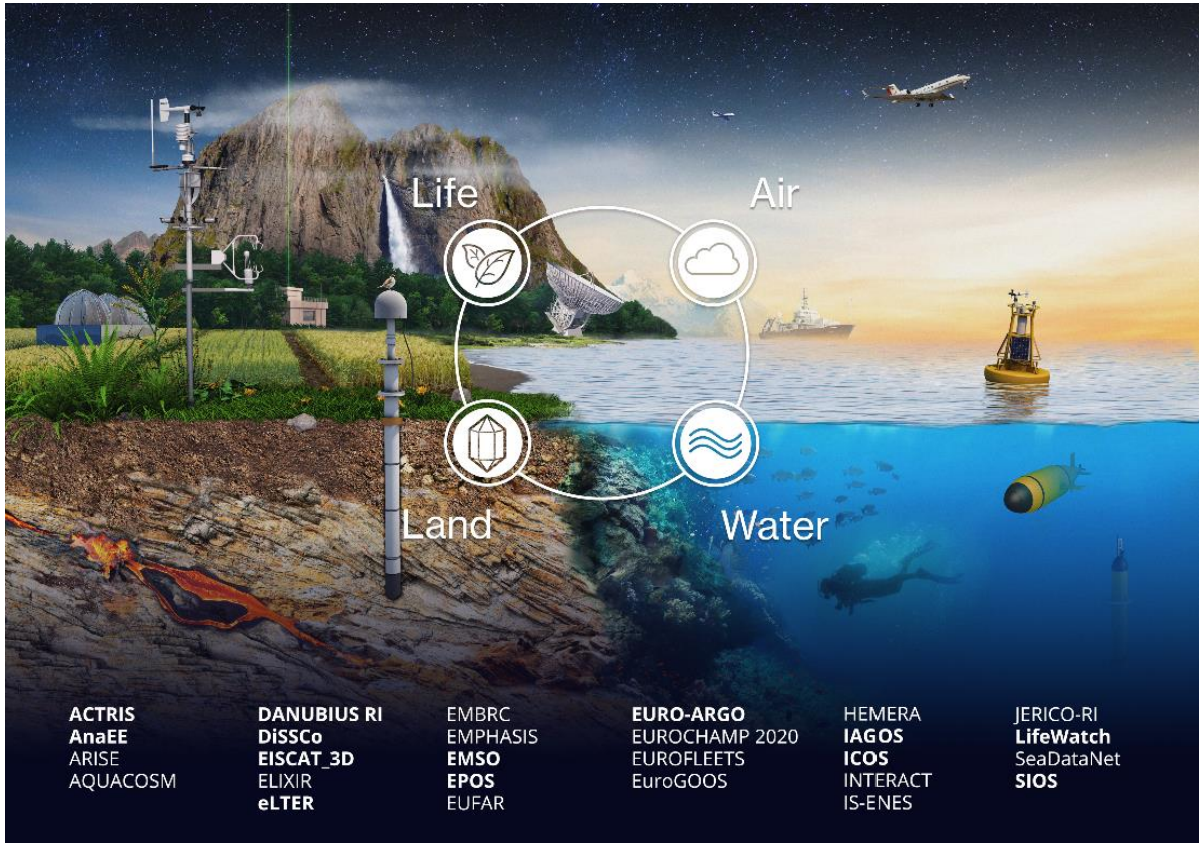
GCOS / WMO : Global Climate Indicators are a set of parameters that describe the **changing climate** …

Fighting Climate Change requires

- integrated information on all compartments of our planet, from environmental to life sciences
- joint monitoring of Global Climate Indicators
- free and open access to global observation data
- coordinated interdisciplinary scientific action

The ENVRI-FAIR Mission

ENVironmental Research Infrastructures building FAIR services Accessible for society, Innovation and Research



Environmental Research Infrastructures

- provide data and research products from all four sub-domains of the Earth system
- data are crucial European contributions to global-scale monitoring of the state of the Earth
- data are vital for assessing past and defining future policies, and for the development of environment-friendly innovations
- provide research data and services at EOSC through the ENVRI-Hub

Key Features of Environmental Infrastructures

Interdisciplinarity highly relevant

Specialized observation and analysis platforms

Societal challenges need multidisciplinary methods

Observations often unique - huge datasets

High importance to society, economy and resilience

Wide range of disciplines

High level of specialization requires RI to concentrate on their main tasks and user communities

Multiple infrastructures

An Example: ENVRI Contributions to Copernicus

Air quality observations

Satellite

IAGOS
IN-SERVICE AIRCRAFT FOR A GLOBAL OBSERVING SYSTEM

Airborne

Ground-based

ICOS INTEGRATED CARBON OBSERVATION SYSTEM

ACTRiS
Exploring the Atmosphere

https://atmosphere.copernicus.eu/cams-multimedia

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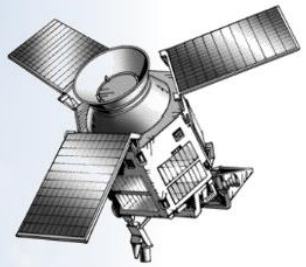
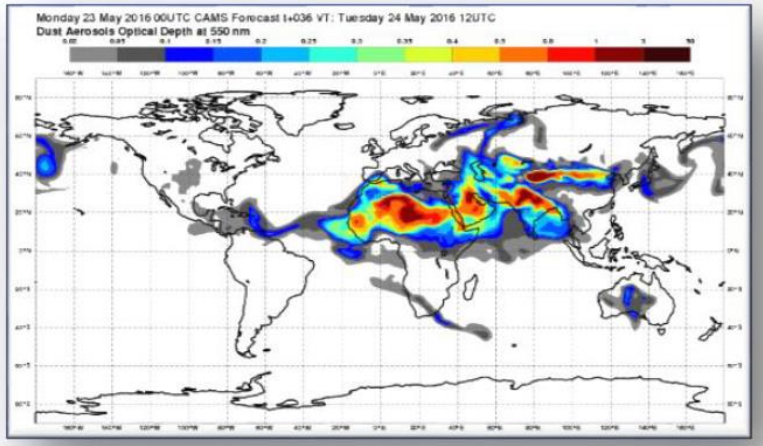
CAMS VALUE-ADDING CHAIN

Atmosphere Monitoring

Space Agencies

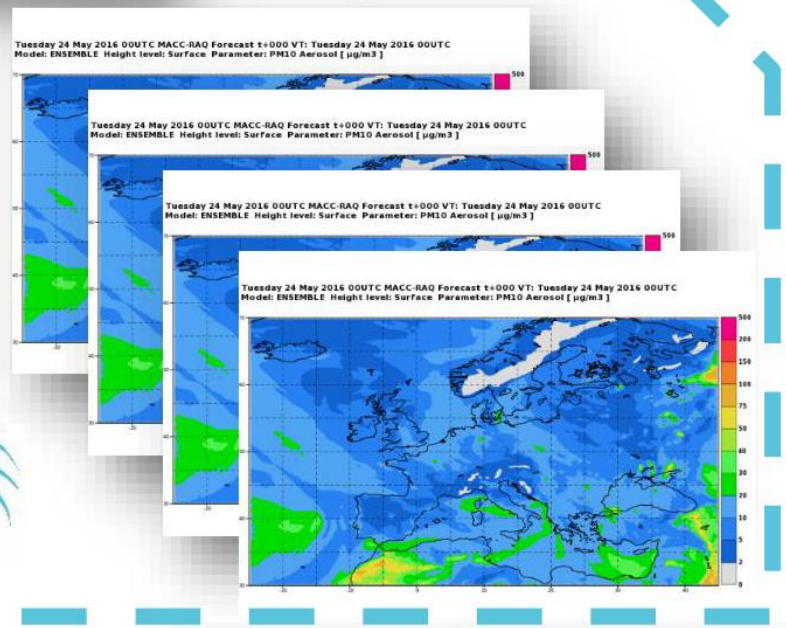


In-situ observations

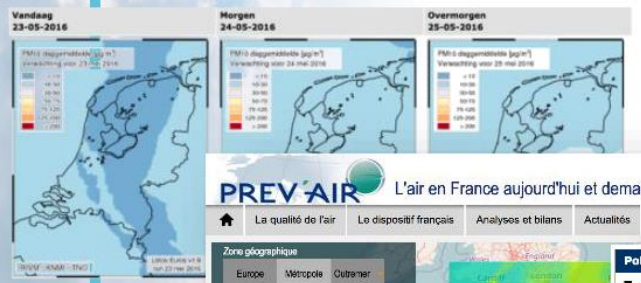


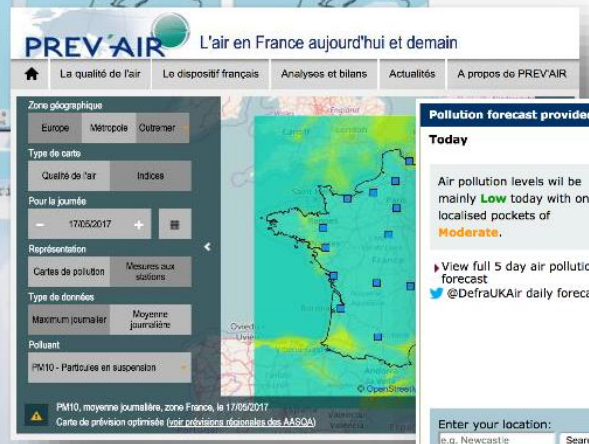
ECMWF/IFS

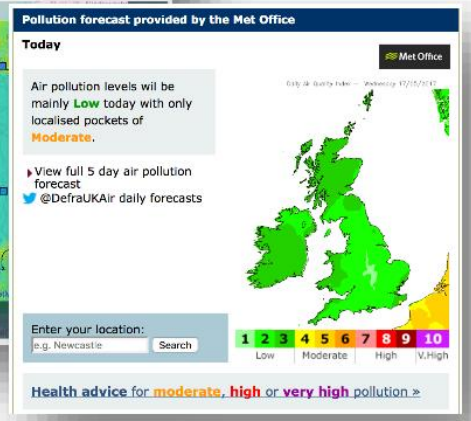
7+2 regional CTMs



National scale







ENVRI Atmosphere

ACTRiS Exploring the Atmosphere

ICOS INTEGRATED CARBON OBSERVATION SYSTEM

IAGOS IN-SERVICE AIRCRAFT FOR A GLOBAL OBSERVING SYSTEM

ECMWF Copernicus Europe's eyes on Earth

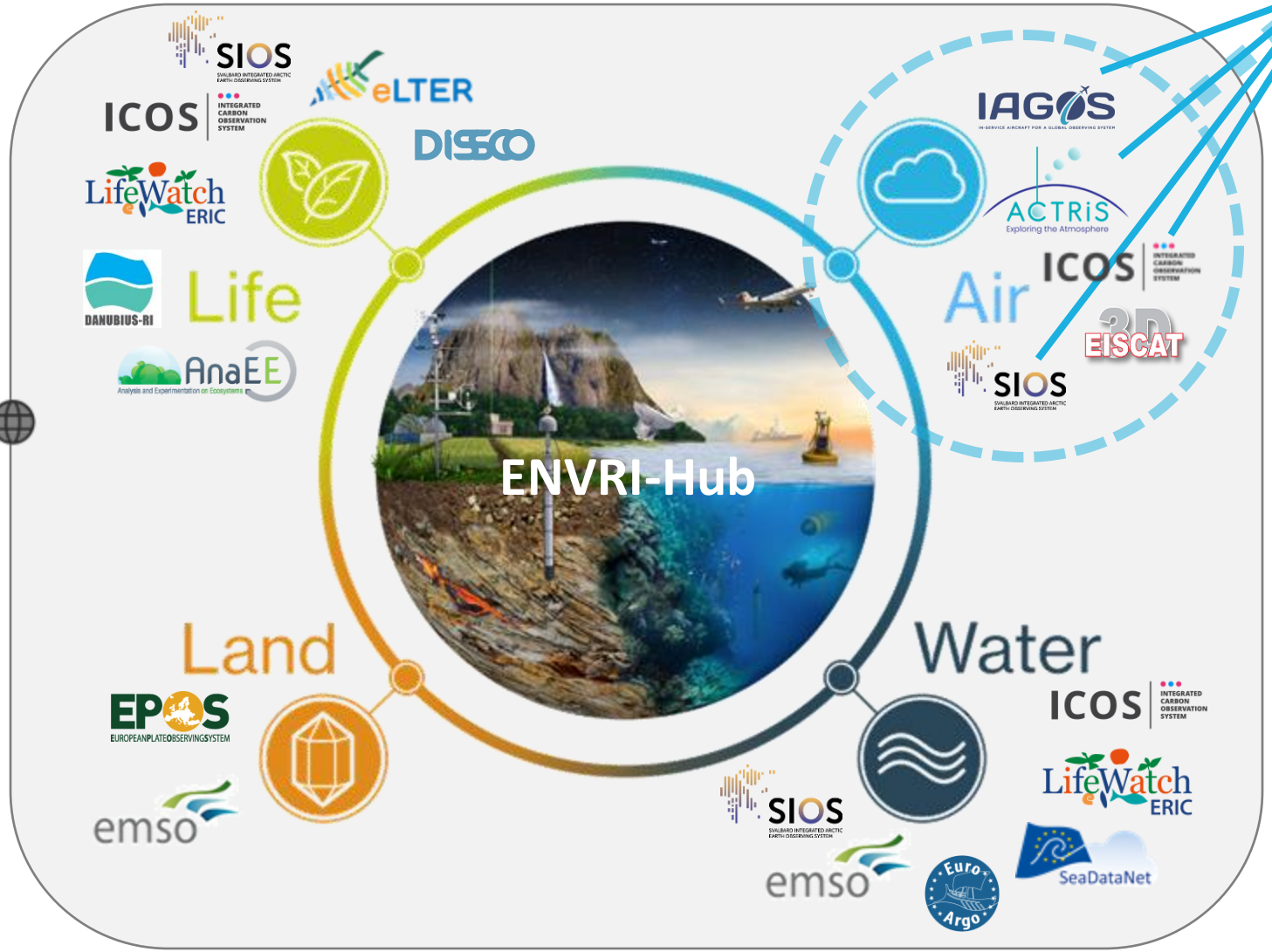
European Commission

ENVRI Resources Provision

Target: Integrated Access to ENVRI Assets

Example

Atmosphere Monitoring Service



eosc

Copernicus Europe's eyes on Earth

Scientists

Industry

Society

Citizens

User community accessing ENVRI via ENVRI-Hub

Scientists

Industry

Society

Citizens

Specialised users accessing RIs or subdomains directly via RI portals or APIs

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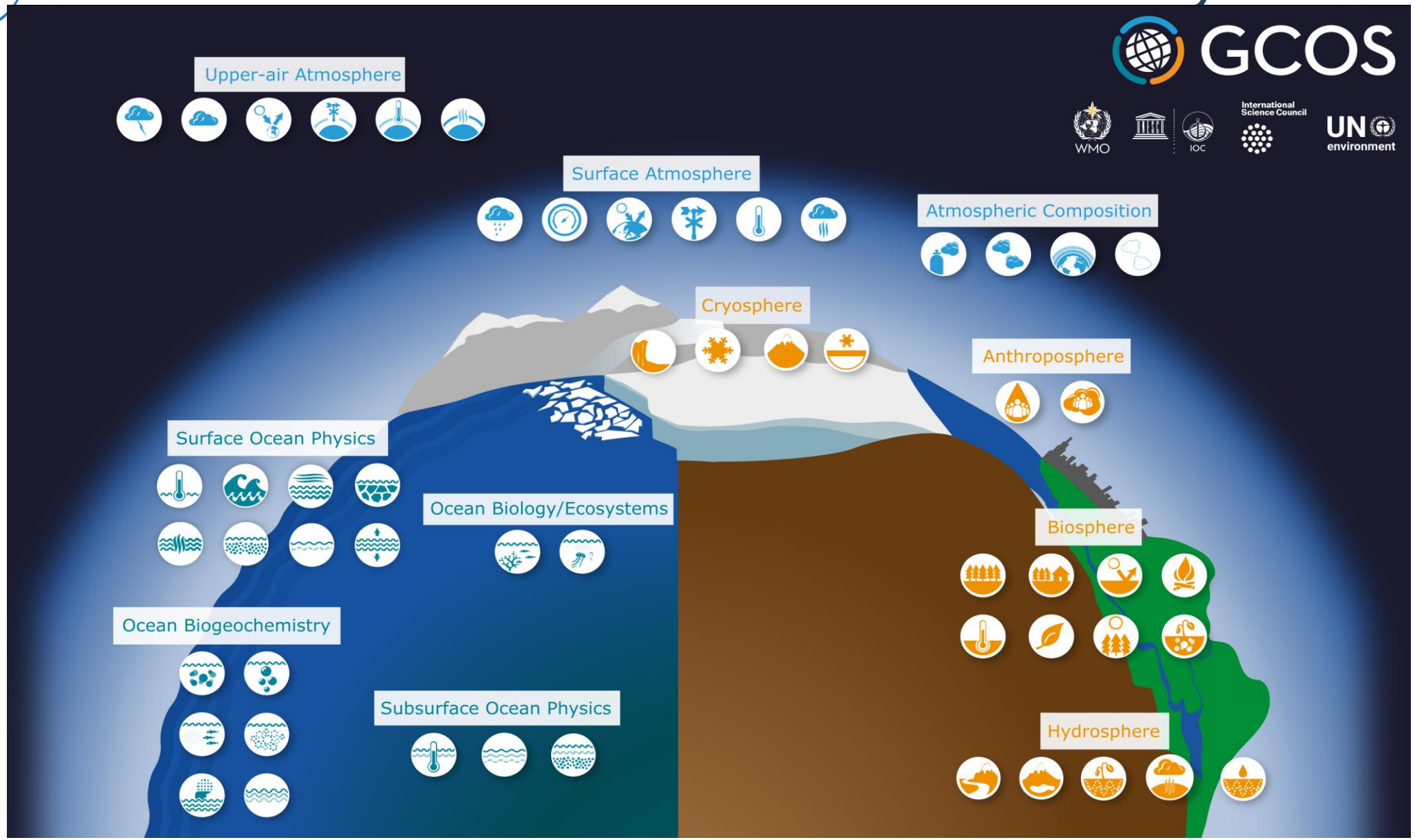
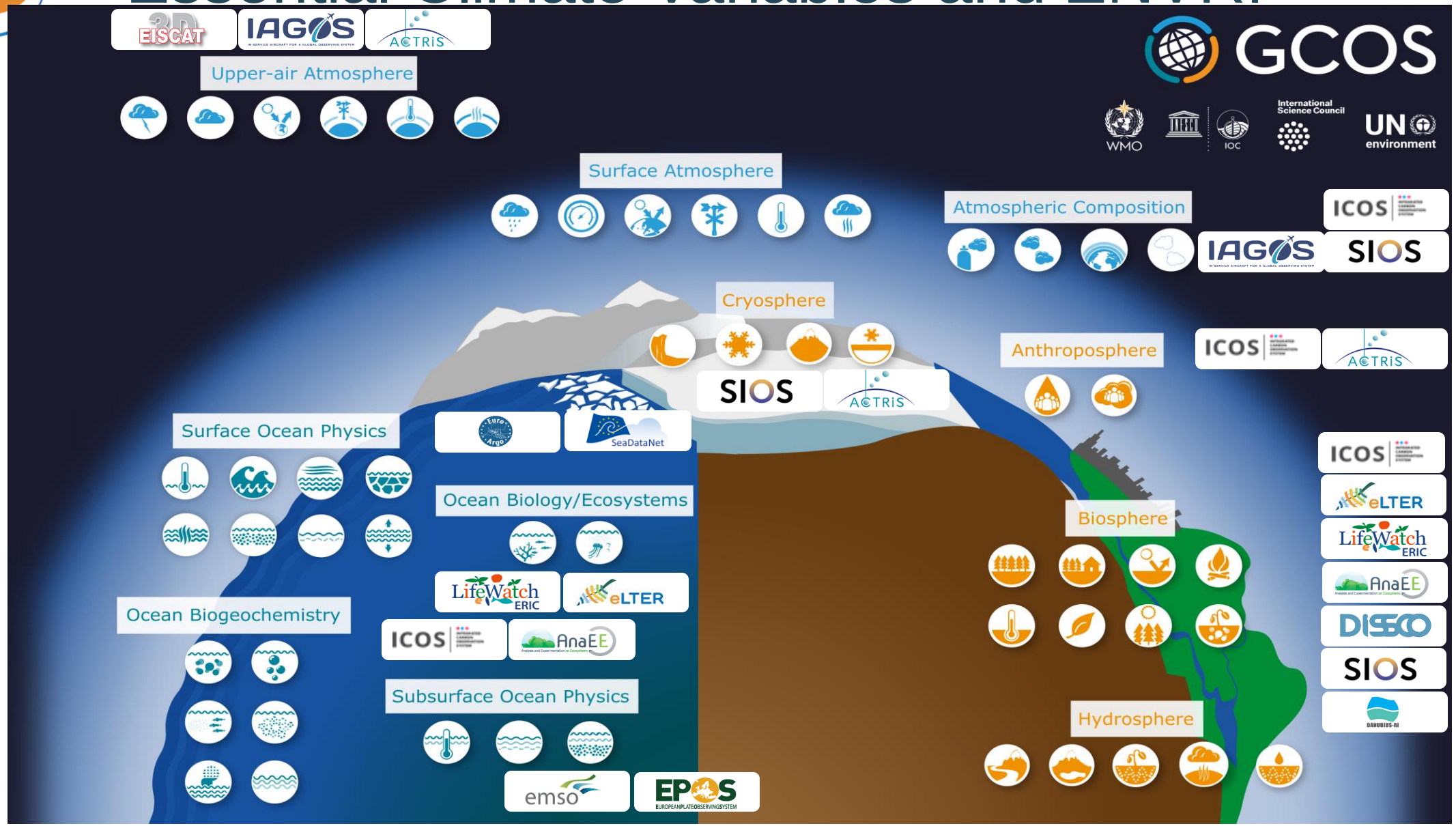
Essential Climate Variables defined by GCOS



Source: https://gcos.wmo.int/en/essential-climate-variables/about

Essential Climate Variables and ENVRI



Source: https://gcos.wmo.int/en/essential-climate-variables/about

Thank you!

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